Appln. No.: 09/775,676

Amendment Dated June 24, 2004

Reply to Office Action of October 23, 2003

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Amendments to the Claims: This listing of claims will replace all prior versions, and listings, of claims in the application

Listing of Claims:

1. (Previously Presented) A <u>single</u> probe apparatus for testing a circuit chip, said <u>single</u> probe apparatus comprising a <u>single</u> probe group having two or more probes, each of said two or more probes having a conductive core, an insulation layer, and a tip, at least two of said two or more probes having a common contacting center within a probe target area, and each of said two or more probes independently conductively contacting within a guiding boundary a single test terminal of said circuit chip and allowing a test path resistance <u>of said single test terminal</u> to be measured <u>based solely between said probes of said single probe group</u> without affecting said circuit chip.

- 2. (Currently Amended) The probe apparatus of claim 1, further comprising an electronic circuit capable of recognizing said test path resistance and correspondingly compensating <u>for a voltage drop of an operational signal passing through at least one of said probes of said single probe group.</u>
- 3. (Currently Amended) The probe apparatus of claim 2, wherein said <u>single</u> probe group comprises three probes and said electronic circuitry is capable of recognizing:
 - a) a first path resistance of said resistance condition-between said a first one of said three probes and said a second contacting means one of said three probes along said single test terminal;
 - b) a second path resistance of said resistance condition between said first one of said three probes and said a third one of said three probes contacting means along said single test terminal;
 - c) a third path resistance of said resistance condition between said second one of said three probes and said third one of said three probes contacting means along said single test terminal; and

wherein said electronic circuitry is capable of compensating <u>for</u> said voltage drop individually and in correspondence to one, two or three optional signal paths related to said probes.

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4. (Currently Amended) The probe apparatus of claim 2, wherein said <u>single</u> probe group comprises four probes and said electronic circuitry is capable of recognizing said test path resistance according to 4-Wire Ohm's Measurement.

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- 5. (Original) The probe apparatus of claim 1, wherein at least one of said two or more probes is a buckling beam.
- 6. (Currently Amended) The probe apparatus of claim 1, wherein said <u>single</u> probe group is bundled in a single perforation of a sheath being part of said probe apparatus.
- 7. (Original) The probe apparatus of claim 6, wherein said single perforation is a long hole.
- 8. (Original) The probe apparatus of claim 6, wherein said single perforation is a circular hole.
- 9. (Currently Amended) The probe apparatus of claim 1, wherein said two or more probes have probe tips essentially concentrically arranged in correspondence to a rotation axis of said single terminal <u>and</u> having a rotationally symmetric and non planar contact surface such that said two or more probes contact said single <u>test</u> terminal in a self centering fashion.
- 10. (Original) The probe apparatus of claim 9, wherein said probe tips are essentially spherical.
- 11. (Currently Amended) A method <u>to compensate</u> for compensating a voltage drop of an operational signal passing through an operational signal path having a constant resistance and a variable resistance related to a contact quality of a probe and a <u>single</u> terminal of said operational signal path, said method comprising the steps of:

contacting said <u>single</u> terminal with a <u>single probe</u> group of comprising two or more of said probes;

recognizing determining a path resistance along respective pairs of said two or more probes of said single probe group, said single terminal and respective interfaces between said probes and said single terminal;

deriving an operational signal path resistance from based on said path resistance; and

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compensating <u>for</u> said voltage drop in correspondence to said operational signal path resistance.

- 12. (Currently Amended) The method of claim 11, wherein said contacting is provided by said <u>single probe</u> group including a first, a second and a third of said probes, wherein said recognizing determining step includes recognizing determining a first, a second and a third path resistance corresponding to said first, <u>said</u> second and said third of said probes, and wherein said deriving includes deriving an absolute value of a first, <u>a</u> second and <u>a</u> third operational signal path resistance corresponding to said first <u>path resistance</u>, <u>said</u> second <u>path resistance</u> and <u>said</u> third path resistance.
- 13. (New) The probe apparatus of claim 1, further comprising means for averaging the resistance between said at least two probes by dividing the determined resistance by the number of probes in the single probe group and basing said signal compensation on said averaged resistance.
- 14. (New) The probe apparatus of claim 1, wherein each of said two or more probes have a conductive core, an insulation layer, and a tip.
- 15. (New) A single probe apparatus for testing a circuit chip, said single probe apparatus comprising:
 - a single probe group having two or more probes, said two or more probes:
 - i) having a common contacting center within a probe target area, and
 - ii) independently conductively contacting within a guiding boundary a single test terminal of said circuit chip to allow a test path resistance of said single test terminal to be measured based solely between said probes of said single probe group;

means for averaging the resistance between said at least two probes by dividing the determined resistance by the number of probes in the single probe group; and

means for adjusting a level of a test signal provided to said circuit chip based on said averaged resistance.